

**BEAM CAMBER**

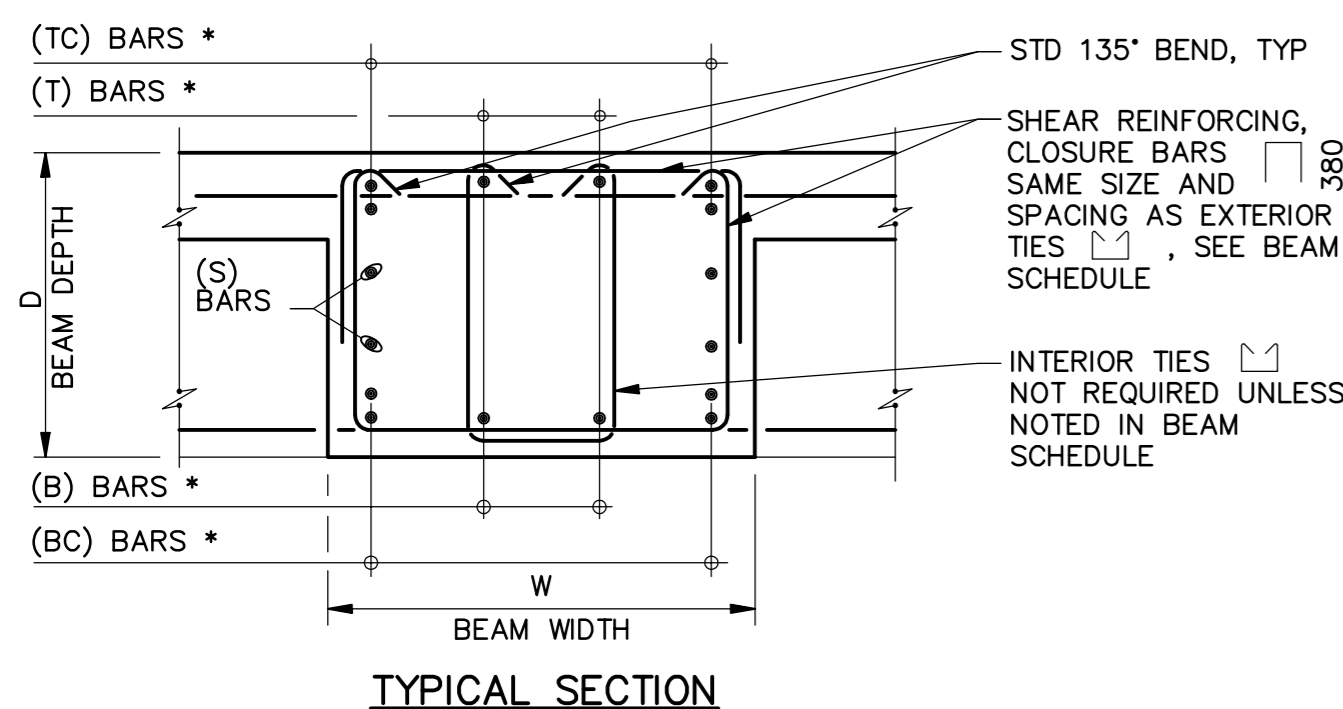
UNLESS SHOWN OTHERWISE IN SCHEDULE MIDSPAN BEAM CAMBER SHALL BE AS FOLLOWS:

BM SPAN	CAMBER
4500mm OR LESS	NONE
4500mm TO 7500mm	13mm
7500mm TO 10500mm	25mm
10500mm TO 13500mm	40mm

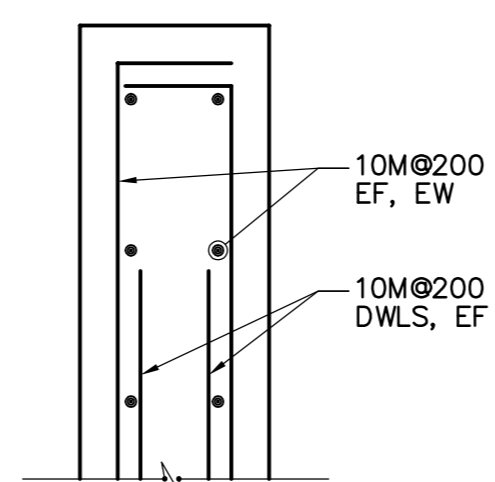
**NOTES:**

1. PROVIDE MINIMUM 1 - 15M x CONT AT EACH CORNER OF ALL TIES, LAP SPLICE WITH LONGITUDINAL REINFORCING.
2. \* INDICATES LOCATION FOR BARS AT SINGLE ROW. WHERE MORE THAN ONE ROW OF TOP OR BOTTOM BARS OCCUR, PROVIDE 25mm CLEAR BETWEEN ROWS. SEE SCHEDULES FOR MAXIMUM NUMBER OF BARS PER LAYER.

**BEAM REINFORCING**  
N.T.S.



**TYPICAL SECTION**



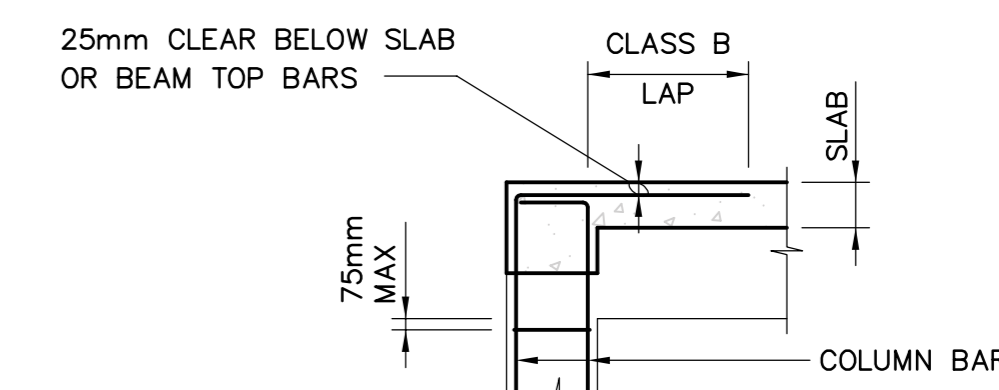
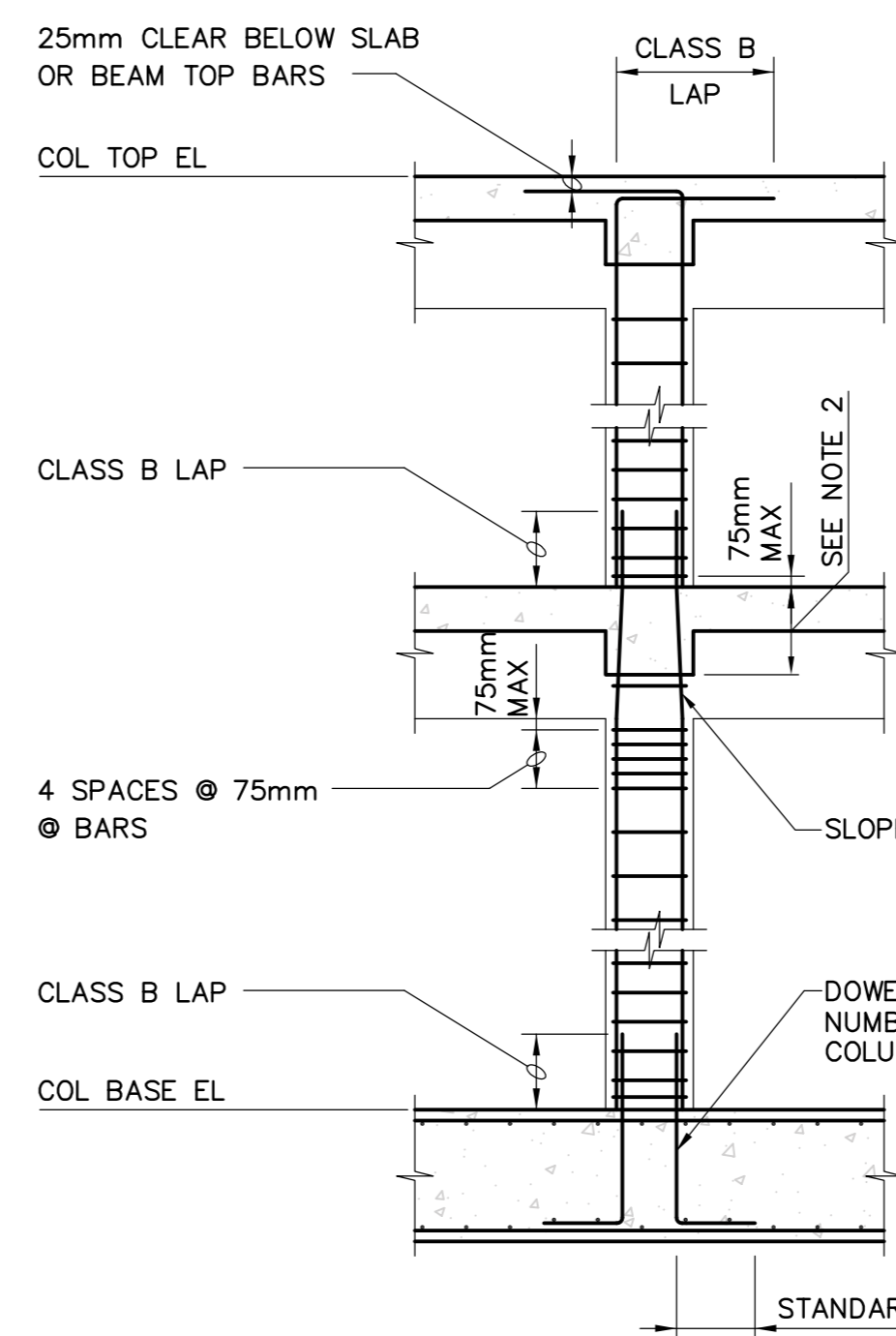
**TYPICAL UPSTAND REINFORCING**

BEAM NO. (SEE PLANS)	SIZE		TOP REINF AT LEFT SUPPORT		BOTTOM REINF		* TOP REINF AT RIGHT SUPPORT		S BARS	SHEAR REINF (MM)		REMARKS
	W	D	T	TC	B	BC	T	TC		NO. SIZE	SPACING FROM LEFT SUPPORT	
BM1	700	900	-	4-30M	-	12-35M	-	4-30M	4-25M	2-15M	200	SEE NOTE 4
BM2	700	900	-	4-30M	-	8-30M	-	4-30M	2-20M	2-15M	200	BOTTOM BARS, 2 LAYERS
BM3	500	900	-	4-30M	-	4-30M	-	4-30M	2-20M	2-10M	150	-
BM4	450	500	-	4-20M	-	4-25M	-	4-20M	2-20M	15M	150	W/ UPSTAND
BM5	600	500	-	4-25M	-	4-25M	-	4-25M	2-15M	15M	150	W/ UPSTAND
BM6	450	500	-	4-20M	-	4-25M	-	4-20M	2-20M	15M	150	W/ UPSTAND
BM7	450	500	-	4-20M	-	4-25M	-	4-20M	2-20M	15M	150	W/ UPSTAND
BM8	450	500	-	4-20M	-	4-20M	-	4-20M	2-15M	10M	150	W/ UPSTAND
BM9	400	600	-	3-20M	-	6-20M	-	3-20M	-	10M	200	BELOW SLAB
BM10	600	500	-	4-20M	-	4-25M	-	4-20M	2-20M	15M	150	W/ UPSTAND

**BEAM SCHEDULE**  
N.T.S.

**NOTES:**

1. \* TOP REINFORCING MAY BE CALLED-OUT TWICE IN SCHEDULE. (I.E. "TOP REINFORCING AT RIGHT SUPPORT" OF BEAM THAT IS CONTINUOUS OVER THE RIGHT SUPPORT IS CALLED-OUT AS "TOP REINFORCING AT LEFT SUPPORT" OF ADJACENT BEAM.)
2. LEFT SUPPORT IS DESIGNATED AS THE SUPPORT CLOSEST TO THE LEFT SIDE OR BOTTOM OF SHEET ON WHICH FRAMING PLAN IS DRAWN, UNLESS NOTED OTHERWISE ON PLAN.
3. FOR CONCRETE BEAM END DETAIL SEE
4. BOTTOM BARS, 2 LAYERS, BOTTOM BARS CAN BE RAISED 30mm TO CLEAR BM2 AND BM3 BARS.

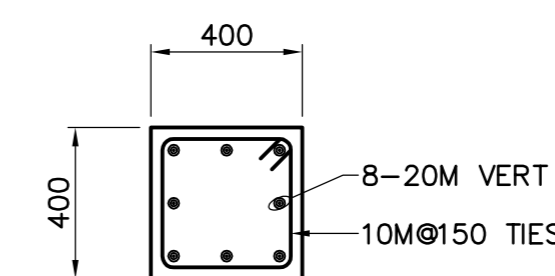


**NON-CONTINUOUS END**

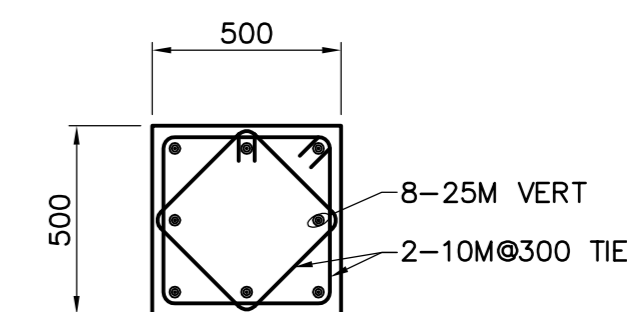
**NOTE:**

1. FOR DIMENSIONS AND REINFORCEMENT SEE COLUMN SCHEDULE.
2. CONTINUE TIES AT SPACING NOTED THROUGH BEAM CONNECTION ZONE WHERE CONCRETE BEAMS DO NOT FRAME INTO COLUMN ON ALL FOUR SIDES

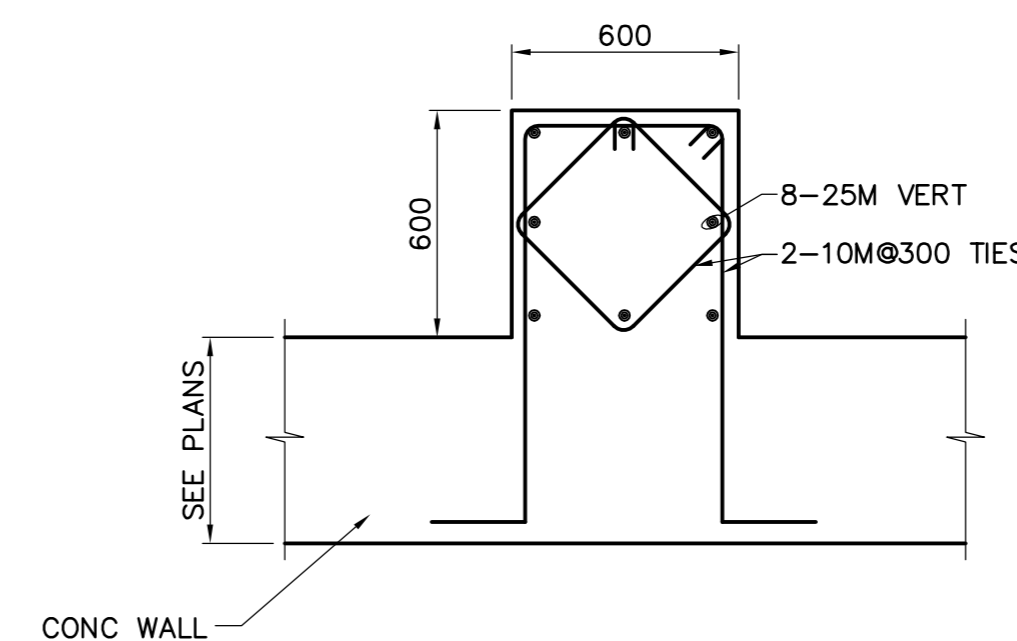
**COLUMN REINFORCING**  
N.T.S.



**COLUMN C1**



**COLUMN C2**



**COLUMN C3**

**COLUMN SCHEDULE**  
N.T.S.



DESIGNED BY: EL	CHECKED BY: AP
DRAWN BY: RL	APPROVED BY: DJT
SCALE: NTS	RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI
DATE: 2005/09/16	DATE: 2005/10/28

ENGINEER'S SEAL  
ORIGINAL SIGNED BY  
D. KRUGER  
2005/10/28  
CONSULTANT DRAWING NO.  
WI-S0515

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
ENGINEERING DIVISION

WATER TREATMENT PLANT  
INLET WORKS & RAW WATER PUMPING  
FOUNDATIONS AND CONCRETE STRUCTURES 1

STRUCTURAL  
RAW WATER PUMP STATION AREA  
COLUMN AND BEAM SCHEDULES

CITY FILE NUMBER  
SHEET OF  
CITY DRAWING NUMBER  
**1-0601-D-80515-001-00D**